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DO WE WANT AN ELASTIC CURRENCY ?

IF one were to take a poll of the writers who have participated in the various currency controversies of this century, he would probably find a majority of the eminent names on the side of an elastic system. But as regards the practical outcome of these controversies, the victory, as is well known, has remained, in both England and the United States, with the advocates of a *safe* rather than an *elastic* currency. In the recent revival of agitation upon this matter, expert opinion has almost without exception declared for elasticity. Yet in this case, as in the former controversies, the idea has not been able to gain for itself legislative approval. For this failure to secure the realization in practice of an idea which seems to have gained such general acceptance in theoretical discussions, there are doubtless many causes, political and social, with which the economist has no concern. But I cannot avoid the conviction that one cause of some significance is the fact that this unanimity of opinion is to a considerable extent only apparent, — that there is not a little half-latent scepticism as to the value, or at least as to the importance, of elasticity. This conviction has led me to attempt a somewhat systematic investigation of the matter from the standpoint of experience. Is there a real need in the business world for an elastic currency, or is the whole agitation based upon a highly plausible *a priori* argument having little foundation in fact ? That it must be very difficult to reach any definite conclusions from an investigation of this character, will at once be evident to every student of economics. After giving much time to the study, I am obliged to admit that the results are very meagre, and by no means decisive. They will, I think, be improved with still further expenditure of time ; but at best they will not prove satisfactory. As now formulated, however, they may have some value.

It is hardly necessary to enter into an extended discussion of the meaning of an elastic currency. In general, we understand by this term a currency the amount of which varies in accord with the varying needs of industry. I have purposely avoided saying, "which automatically varies"; since it seems to me that for all practical purposes even a purely arbitrary adjustment of the money supply to the money need must be substantially the same in its effects as an adjustment brought about through more natural means. I assume, therefore, that the various operations of the United States Treasury during the years of surplus revenue, whereby the amount of money in circulation was diminished at certain seasons and increased at other seasons, in accord with the supposed needs of trade, gave to the currency a real elasticity, though not of the most desirable sort. Again, we shall find it convenient, at times, to distinguish what we may call ordinary elasticity and "emergency elasticity." By the former, I mean that elasticity which adapts the amount of the currency to the varying needs of trade within the limits of a single ordinary year. By "emergency elasticity," on the other hand, I mean the capacity of the currency to adjust itself to those fluctuations in the need for money which characterize a panic.

The argument of this paper will fall into the three divisions indicated by the following questions: (1) Are there decided variations in the monetary need of the country from season to season, or from year to year? (2) Is the failure of correspondence between the supply of, and the need for, money, which these variations in need tend to bring about, productive of harm? (3) Have we grounds for thinking that elasticity in the supply would diminish this harm?

I.

First, then, are there decided variations in the need for money in different years, and at different times in the same year? Beginning with the latter case, shall we look for variations in monetary need between winter and spring, or between

summer and fall, in the course of an ordinary year? On purely *a priori* grounds we should, of course, expect such variations. Nothing, surely, could be more natural than that, with the changes of the seasons, industrial activity should ebb and flow, and that with this ebb and flow there should be a corresponding contraction and expansion in the need for money. Midsummer, for example, is naturally a period of diminished activity; while autumn, on the other hand, brings renewed life in all industrial pursuits. With the latter season comes the much-talked-of need for money "to move the crops." Further, on the side of consumption, society has at this period greater need for actual money. At the change of seasons every family is obliged to incur a large amount of preparatory expenditures, *e.g.*, for winter clothing and fuel. Further, a variety of special outlays, for insurance, taxes, schoolbooks, tuition, *etc.*, are likely to be massed at this season of the year.

But while all would admit the naturalness of a change in the need for money at different seasons, there has recently developed a tendency to argue that matters have been wholly altered by the great development of credit media of exchange. Since these media carry on by far the larger part of the business of the country, and since they are indefinitely elastic, it is held that no real change in the need for money, as distinguished from credit, is felt. Even the idea of a special need for money to move the crops is scouted. The crops, we are told, are moved, like everything else, with checks. All this, however, is easy to answer. Doubtless there has been a great extension of the use of credit, but credit has not wholly superseded money; and so long as there is any field left to money, the need within that field is liable to expansion and contraction. Indeed, as regards moving the crops, the extension of credit is almost entirely in seeming. The checks which are used to buy wool and wheat are nothing more than tickets, which the receiver, in nearly all cases, at once exchanges for cash. They thus effect no material saving in the need for money. But, aside from this reasoning, the true way to settle the case is to appeal to the facts furnished in abundance by the reports of

the commercial journals. Changes in the money need of the country inevitably show themselves in a variety of monetary phenomena.

Particularly significant is the ebb and flow of money between the country at large and the great banking centers. Whenever, through the falling off in the need, money becomes idle, it is, of course, commonly deposited in a bank. But the bank, in turn, does not have use for unlimited funds; and, if it be outside one of the reserve cities, it naturally ships any surplus to its nearest reserve agent. He presently finds himself overloaded, and passes the currency on to his New York correspondent. Thus, money which through the diminution of need has been rendered idle tends to accumulate in New York. On the other hand, if the need for money increases, at once a reverse movement begins. The local banker, where the increased need originates, calls on his nearest reserve agent for currency; the latter, in turn, applies to his correspondent in one of the larger reserve cities; and finally, the reserve cities have to fall back on New York. If we could follow these movements with certainty, we should have incontestable evidence on the point at issue. As a matter of fact, such certainty is not possible. Still, several quite unmistakable indications are available.

In the first place, *Bradstreet's* prints each week reports from the different large cities of the country, which give, among other things, the general direction of currency movements between bankers. I have made citations covering a number of years, which show a high degree of regularity. During the first four or six weeks of each year they run generally like this: Kansas City, January 12, "The flow of money is still toward the city"; Chicago, January 14, "Country bankers are borrowing but little money, and are shipping currency freely to this point"; Boston, January 21, "The last bank statement indicates a considerable influx of funds from the country." Presently there is a slight change: Kansas City, February 25, "The flow of money has been more toward the country during the week, while the return wave has not been large"; March

29, "The outside banks are drawing more heavily upon the city." But April brings the renewal of the movement of January: Kansas City, April 14, "The flow of money is more toward the city"; Omaha, April 27, "Country banks are increasing their balances here." This continues for some weeks—indeed, for most of the country, till July. The South, however, changes the movement earlier. Even in May New Orleans reports: "A fair movement of funds to the interior has set in." With July similar reports begin to come in from cities farther north. On the 14th of that month Kansas City reports, "The flow of money is more toward the country"; July 21, "The demand for money from country banks is quite large"; August 3, "Country banks still continue to draw upon this city"; Chicago, September 8, "Currency shipments have commenced to increase in all directions." This movement continues for many weeks, but at last the current moderates. October 26, New Orleans reports, "The return of funds from the interior has commenced"; November 30, Chicago reports, "Currency orders from the country have been light"; Omaha, December 14, says, "The demand from the country has fallen off." By the end of the month the movement is fairly reversed, and the tide is toward the cities. To recapitulate, the country shows a diminished need during the first few weeks of the year; a slight increase late in February or early in March; a considerable decline in spring and early summer; a great expansion during the autumn, and a falling off in the last weeks of the year.

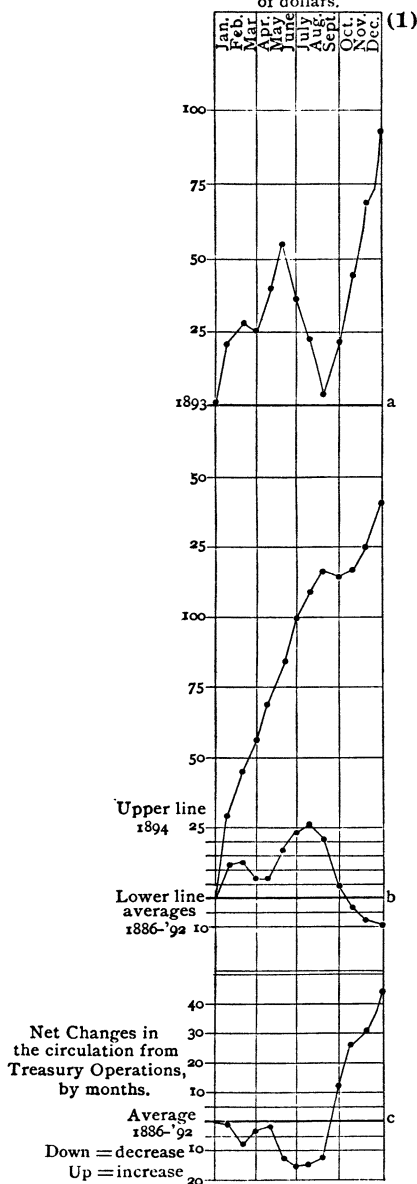
Still more striking confirmation of the usual opinion is furnished by the actual figures for the movements of money between New York and the interior. The net movement of each week, whether to or from the city, is reported by the *Financial and Commercial Chronicle*. I have compiled the figures for seven years, 1886–92, and embodied them in a diagram (I, 1, b). This diagram tells the same story. During January and February the country is emptying its idle money into New York. In March there is a slight reaction. This lasts but a few weeks, however, and from May till August the

I

Currency movements between
New York and the Interior,
by months.

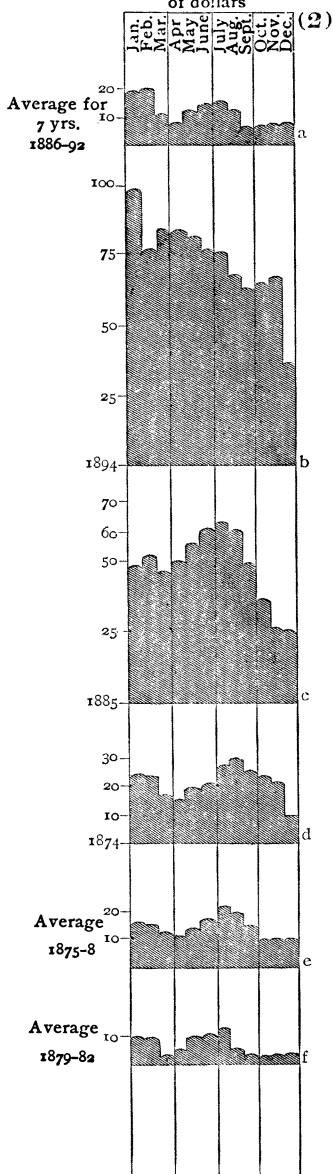
Up = into N.Y.; Down = out of N.Y.

The figures indicate millions
of dollars.



Reserves of New York Banks.
Surplus above 25% of deposits,
by months.

The figures indicate millions
of dollars



tide again flows strongly toward New York. With August the turn comes, and the movement to the interior is strong and continuous till about the close of the year.

Finally, since New York keeps the reserves for the whole country, we should naturally look to the state of her reserves to learn the changes in the need of the whole country. If New York's surplus is larger than usual, and there has been no increase in the general stock of money, evidently the country as a whole is making little call for funds. If, on the other hand, New York's reserves run low, somebody certainly is making use of the money. I have compiled and averaged these surplus reserves for seven years, as before. The results, as exhibited in Diagram I, 2, *a*, agree perfectly with those already obtained: little demand in midwinter, a slight increase in early spring, a falling off in spring and early summer, a great increase in autumn, and a decline at the close of the year. That these changes in the condition of New York reserves were not due to changes in the amount of the general circulation of the country, is evident from the circulation statistics for the same period. Thus, in the autumn months, when the reserves were at their lowest point, the general stock of money in the country, outside the United States Treasury, was most expanded, as appears in Diagram I, 1, *c*.

I have spent a great deal of time showing that even in ordinary years there are considerable variations in the need for money. It will not be necessary, however, to dwell long on the case of the extraordinary variations characterizing a panic. The great crisis of 1893 is still so near that we have lively memories on that point. For the first time in many years, money was so scarce as to make necessary all sorts of temporary expedients to furnish even a medium of exchange for ordinary business. But, of course, the serious part of the affair was the unprecedented increase in the demand for money as the instrument in which value is hoarded, as the basis of the system of credit, and as the means of payment which should guard against universal bankruptcy. Some idea of the dimensions of that increase in demand can be obtained by

considering that, in the course of a few weeks, the country absorbed twenty millions of national-bank notes, forty millions of imported gold, sixty-three millions of clearing-house loan certificates, besides uncounted millions of certificates of deposit, certified checks, *etc.* On the other hand, the diminution in the need for money when the panic had passed was no less extraordinary. With the second week in September, the country began emptying its surplus funds into New York. For seventeen weeks the amount each week averaged five and one-half millions. For thirty-seven weeks longer the influx continued, though at a slightly lower figure. During the whole fifty-four weeks the total received by New York reached 214 millions. Even when the tide turned and the country began to ask for money, the reverse movement proved to be very short-lived and insignificant, lasting five weeks and netting less than five and a half millions. Nor are we to suppose that these results arose from a mere change in the distribution of the need—that New York wanted the money, while the country was through with it. Doubtless, after the panic New York needed some funds to restore her reserves to the normal condition. This need, however, was satisfied in the course of three weeks, at the end of which time the surplus reserves stood at seventeen millions. But they did not stop here. A week later they were twenty-four millions; by the end of October, twenty-eight millions; by the end of December, eighty millions; and early in February, 111 millions—a figure never before reached in our banking history. (See Diagrams I, 1, *a*, *b*, and I, 2, *b*.)

In bringing out the fluctuations in the money need characteristic of a panic, it has been proved as well that the need is subject to great variations as between different years. Thus, the long-continued influx of funds to New York during 1894 shows plainly that the total need of the interior for that year was much below normal. As regards the country in general, if we take the surplus reserves of New York as fairly trustworthy indices, we find the greatest diversity in the needs of different years. Thus, years of depression or of very

moderate activity, like those from 1874 to 1878, always show large reserves, and therefore little need for money; while prosperous years, like those from 1879 to 1882, or from 1887 to 1889, show moderate or rather low reserves, *i.e.*, much need for money. (See Diagram I, 2, *b-f*.)

II.

Assuming it to be sufficiently established that the money need is subject to very considerable variations at different seasons and in different years, it is now incumbent upon us to consider whether the failure of the volume of money to adjust itself to these variations results in harm. That such harm does result, at first thought seems too evident to need proof. "Surely," one argues, "no one can doubt that if possible the supply ought to correspond to the demand; and that if it does not, some degree of evil must follow." But a second thought raises doubts. Variations in the need for a given commodity are not uncommon in the industrial world, and they do not cause serious inconvenience, though the total stock does not expand or contract in accord with these variations. For example, the street-car system of any large city is called upon to do extra work at certain hours of the day; but of course no one demands that there should be some process by which the number of cars in existence can be suddenly increased or diminished. The variations in need are met by having large stocks, which are idle during the quiet hours, and are brought into requisition when the special need arises. Just so, it may easily be argued, should it be in the case of money. A good banking system ought to furnish all really necessary elasticity. The process described above, whereby the idle money of the country flows into the bank reserves, first, of the small towns, then of the larger, and finally, of the central reserve cities, is just what ought to be. And the banks in the central reserve cities ought to remember that the money they receive is only temporarily idle — that it will be wanted again in a few months; and, remembering this,

they ought so to manage as to have the money ready when it is needed. Doubtless there is much force in this presentation of the case; and doubtless banks do reckon upon such expansions of need and do more or less fully provide for them in advance.¹ Nevertheless, bankers are, after all, private citizens in quest primarily of their own interests. To the mind of a bank officer, a reserve does not present itself in the first instance as a part of the equilibrating reservoir of the currency. To him the reserve is rather the bank's stock in trade — the store from which is drawn the cash, and the foundation that at once sustains and limits the credit which the bank loans for a consideration. Bank officers will always be tempted to treat excessive reserves as so much extra loaning power, and so will be tempted to inflate the bubble of credit. Further, there will always be danger that in thus treating their surplus reserves they will leave themselves insufficient resources for the time when the need for money has expanded. In a word, under normal conditions a banking system as such provides against excess or deficiency in the ordinary circulation, but not against excess or deficiency in the bank reserves themselves.

It would, perhaps, be begging the question to say at the outset that our system is subject to alternations of excess and deficiency in the bank reserves; since "excess" and "deficiency" imply injuriously high or injuriously low bank reserves. But that each year shows alternations of decidedly high and decidedly low reserves needs little proof. The data already used to show the variations in money need, show the existence of such alternations during the years 1886-92. My own studies have covered the period from 1871 to 1895; and of those twenty-five years there is only one which does not show within its limits a variation of more than fifteen millions of dollars in the surplus reserves, while a variation of twenty-five millions is not uncommon. In like manner, whole years and groups of years compared with one another exhibit similar alternations of high and low reserves. For example, 1885 and 1894 were years of extraordinary plethora; 1874 and 1895, of

¹ Kinley, *The Independent Treasury*, Appendix vi.

decided plethora. (See Diagram I, 2, *b-d*.) On the other hand, outside the panic years, at least three were years of pretty constant stringency—the reserves being below the legal minimum during nine or ten weeks of each year, and never averaging for a month above a ten-million surplus. Are such variations in any degree harmful?

In the first place, it is plain that whatever harm may be caused by alternations of high and low bank reserves, must come, in the first instance, from their influence on the loan market. In that market they will evidently tend to cause alternations of ease and tightness. Of such ease or tightness, two sorts need to be noted. We may mean by ease a state of things where the borrower finds no difficulty in getting advances on ordinary securities; and tightness would of course be the reverse. On the other hand, we may mean by ease a condition of things where a low discount rate prevails, and by tightness, the reverse. In minor markets the one will often be present without the other; in a great center like New York they are usually found together: but, in any case, they are to be considered distinct forces as regards their power for good or evil.

That alternations of high and low reserves do give rise to alternations of ease and tightness in the first sense, scarcely needs proof. The sort of credit and the sort of security which lenders demand, vary constantly with the abundance or scarcity of the funds at their disposal. If they have abundance, they cannot afford to be particular. In the opposite condition, they must reject some applications, and will, of course, reject the least desirable. If one opens a copy of the *Chronicle* for some date in the fall of almost any year, his eye will fall on sentences like these:

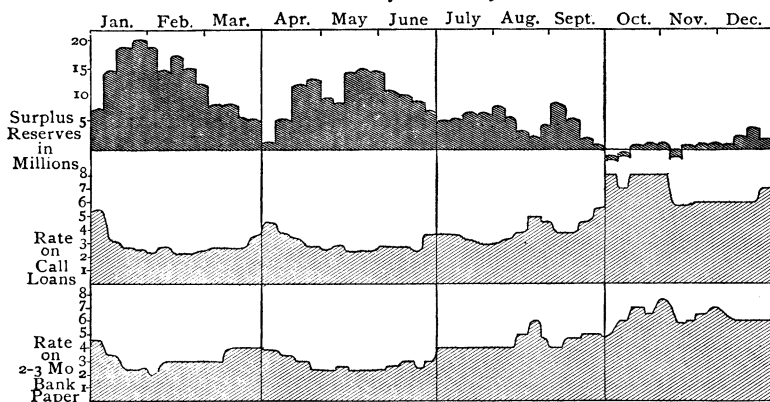
Lenders carefully scrutinized the collateral, declining to loan upon a certain class of stocks and bonds; and they required unexceptionable security well margined [Oct. 3, 1891].

Loans on such collateral as will sell in the market are now the principal method of employment of capital. As none but those who have the least need for money have the collateral, this usually cuts off a great part of the usual loans by banks [Oct. 6, 1883].

But alternations of high and low reserves no less certainly give rise to alternations of ease and tightness in the second sense, that is, to low and high rates of discount. The contrary opinion of some eminent economists cannot possibly stand against the overwhelming evidence of experience. In determining the short-time rate, the state of the bank reserves is undoubtedly one of the most important elements. To put to rest any lingering doubts on this matter, I have made detailed comparisons week by week of the surplus reserves and of the rates of discount in New York City for seven

II

Relation of Surplus Reserves and Rates of Discount in U.S.
by weeks, 1889



years, and have found the usual opinion on this point entirely confirmed. As the phenomena do not readily admit the use of averages, I have taken the year 1889 as typical and have embodied the facts of that year in the diagram accompanying. The connection of high bank reserves with low rates, and of low reserves with high rates is here very evident.

Accepting as established, then, the proposition that alternations of high and low reserves will almost invariably be followed by alternations of ease and stringency in the loan market, the question still remains: Are these alternations of ease and stringency productive of harmful consequences? In the first

place, it would be natural to argue that these conditions of themselves increase greatly the risk and uncertainty of all industrial operations. Unexpected tightness in the loan market means that thousands of men who are doing business on borrowed capital suddenly find themselves unable to get their usual supplies *at any price*. This will inevitably cause some losses, considerable curtailing of business, and not infrequently bankruptcy. A mere rise in the rates is much less serious, since it is less likely to cause failure ; but it will certainly entail notable losses. How great these losses are there is no method of ascertaining statistically ; but some idea of their extent can perhaps be obtained by reflecting that in September of 1892 the different banking institutions of this country had out, on demand or short-time paper, loans aggregating about three billions of dollars, and that half of this sum was loaned in nineteen large cities, where rates are subject to more or less constant fluctuation.

According to a common view, there is another way in which alternations of ease and stringency in the loan market increase the risks of business ; namely, by causing abnormal fluctuations in prices. Such an effect, it is held, is particularly clear in the case of securities and of those staple commodities which are speculated upon in the great exchanges of the world. The reasoning upon which the above conclusion is based is comparatively simple. An easy money market means that it is easy and cheap for the prospective buyer to get the funds with which to make his purchases. Demand is therefore excessive, and prices rise. A tight money market, on the other hand, means that it is difficult and expensive for the buyer to get funds. Demand consequently falls off, and prices decline.

Without doubt the above reasoning is extremely plausible, but a somewhat extended investigation of the facts has failed to furnish any considerable confirmation from experience. I am not prepared to say that there is no effect of this sort, but I feel sure that the amount is in common opinion greatly exaggerated. A high level of prices seems perfectly compatible with the average fall stringency, and a low level with the

summer plethora. In like manner, as between years which as a whole show excessive reserves on the one hand, and deficient reserves on the other, the high level of prices is just as likely to appear in the stringent year, and *vice versa*. However, I do not consider my materials sufficiently complete to warrant any dogmatism on this point, or even to justify its extended discussion. I would merely express doubt as to the propriety of attaching any considerable importance to this particular evil supposed to flow from alternations of ease and stringency.

Another harmful consequence that is usually attributed to fluctuations in the loan market is the undue stimulation or depression of business activity. Especially is it customary to complain of the plethora as a great speculation-breeder. Here, again, I conceive that too much weight has been attached to purely *a priori* considerations. It is, of course, natural to expect that an easy money market will support an amount of speculation which will strain the resources of a stringent market. But statistics seem to show that the efficacy of the cause in question is so slight as to make its significance very trifling. Certainly, whatever influence it may exert is in most cases so completely offset by other forces as to be scarcely discernible. Thus, if we compare the total yearly volumes of speculation, we find little evidence that plethoric reserves are favorable or lean reserves unfavorable. For instance, the years 1875 to 1878 were rather plethoric, while 1881 to 1883 were decidedly stringent. Yet in the former group stock speculation amounted to an average of only forty-five million shares per annum, against an average of 109 millions in the second group. Similarly, if we compare 1885 and 1886, we note that the former had surplus reserves averaging about forty-eight millions, the latter had but fourteen. Yet the volume of speculation for the plethoric year was only ninety-two million shares, as against 100 millions for the lean year. Again, 1888 was a plethoric year as compared with either 1887 or 1889, its reserves averaging seventeen millions, against eight in 1887 and seven in 1889. Yet its speculative transactions amounted to sixty-five millions, against eighty-four and seventy-two for the other years.

Only the year 1892, as compared with 1890 and 1891, furnishes some confirmation of the usual view. The first-named had larger surpluses than either of the others, and also a slightly larger volume of speculation—eighty-five millions against sixty-three and seventy-one millions. When we compare the monthly volumes of speculation within the limits of a single year, we find just as little evidence in favor of the common opinion. Out of the seven years, 1886 to 1892, in only one case, 1892, did the two months of greatest speculation correspond with those of highest reserves. During each of the other six years, from two to four of the months of highest speculation were outside the months of highest reserves. But the case can be made still stronger. In five out of the six years, the month of greatest speculation coincided with one of the two or three months of lowest reserves. The fact seems to be that if men are in a speculative temper, they manage to indulge themselves freely on very low reserves; while if they are not inclined that way, an easy money market does not seem to furnish the necessary stimulus.

I come now finally to the common contention that a plethoric condition of the loan market increases the difficulty of protecting the gold reserve of the country. For various causes, this protection of the gold reserve has become an industrial function of prime importance. Doubtless its importance can be, and often is, somewhat exaggerated; but, in any case, the avoidance alike of real and of imaginary ills requires that the matter shall be managed with wisdom and efficiency. Now, our system, which throws this task upon the government, is considered by almost all persons whose opinions have any weight as, at its best, a very bad system. Assuming, however, that there is no chance of making a radical change, it is plain that the performance of this task should not be made unnecessarily difficult. That unnecessary difficulty is caused by a plethora, seems practically beyond doubt. Under our system, the reserve is liable to attack both in the usual way, through a heavy gold export, and also in a way peculiar to the system, through the falling off of the gold receipts of the Treasury.

A plethora plainly tends to weaken our defense at both points.

Let us begin with the latter case. If there is in New York an excess of the different forms of non-standard money, these naturally come to constitute a large part of the Treasury receipts, and so the source of supply upon which we must depend to reinforce the gold reserve is cut off. With an elastic currency, however, there could not be in New York an excess of non-standard or credit money. If we had a currency consisting simply of gold, supplemented by subsidiary silver and a thoroughly elastic system of credit money, the latter would in times of depression be returned to the issuer; and we could never have, as during the last two years, vast amounts of idle credit and semi-credit money accumulating in New York. The Treasury receipts at New York would, consequently, continue to be largely in gold, and no particular difficulty would be experienced in maintaining the reserve, — assuming, of course, that the Treasury should remain solvent on its purely fiscal side.

In the second place, a plethoric condition of the currency plainly tends to weaken our defense of the gold reserve against attack from a prolonged export movement. Even without interference from the banks, every export movement tends to bring about the conditions which of themselves put a stop to its continuance. That is, the export depletes the bank reserves, raises the rate of discount, encourages an inflow of capital, and so checks the outflow of gold. In a plethoric condition of the bank reserves, however, the gold drain must be great and long-continued before it can draw them down to any appreciable extent. Again, it is plain that a plethoric condition of the reserves not only hinders the operation of natural causes which would check exportation, but also, since it tends to produce an abnormally low rate of discount, is likely to aggravate an outflow of gold due to other causes, and even to initiate one of its own.

So far as the above reasoning concerns the influence of a plethora in hindering the operation of the natural correctives of a gold drain, confirmation from experience is easy. This

ground, indeed, has already been largely covered. According to the argument, a gold drain tends to correct itself by bringing up the rate of discount; but the plethora in the bank reserves neutralizes this tendency. Evidently, the soundness or unsoundness of this reasoning depends on the question whether there exists the close connection alleged between the state of the reserves and the rate of discount, and between the rate of discount and gold movements. Evidence on the first point — the connection between the state of the reserves and the rate of discount — has been given already, and might be multiplied indefinitely. The connection between the rate of discount and the movement of gold is by no means so constant. There are other immediate causes operating to determine the movement of gold — causes which are likely to conceal or neutralize the influence of the rate of discount. Consequently, we are not always sure that the raising of the rate by depletion of the reserves through gold exports will check these exports. Yet, plainly, it is more probable that such a result will ensue — that the exports will be checked — when there is no plethora to hinder the gold exports from raising the rate. Further, while the raising of the rate is not absolutely certain to check the export movement, there is ample evidence that it will generally do so. On this point, perhaps, nothing more is necessary than to remind ourselves that the raising of the rate has been so successful in accomplishing this end as to make it the established method of the Bank of England for defending its gold reserve.

One hesitates to leave this question without trying to make the case still stronger by showing that a plethoric currency not only hinders the operation of the natural corrective of a gold drain, but also aggravates such a movement, and may even initiate one of its own. Of course no one denies the probability of such results on purely theoretical grounds; but to prove from experience that the tendency in question is of sufficient power to be of real consequence in our industrial life, is by no means easy. Some weight may be attached to the almost uniform coincidence between high reserves and gold exports; but such a coincidence would naturally be expected on other

grounds. Something like a test case, however, is furnished by a comparison of the first halves of the two years 1886 and 1887. Of these two years 1886 had decidedly more plethoric bank reserves (the surplus averaging for the export months twenty millions against six millions), and the outflow of gold was also much more considerable (forty-two millions against one and a half millions). That these two facts are probably connected as cause and effect it is easy to show; since most of the other causes which might explain the increase were operative in even a less degree in the year of larger exports than in the other. Thus, while the merchandise balance was against us in both years during the months of gold export, the amount was much less for the year of larger gold exports, being only one million for 1886 against twenty-seven millions in 1887. Again, there was in neither year any special effort on the part of the great European banks to draw our gold. Indeed, so far as the European money markets favored either year, it was 1886, the average rate of the Bank of England for the first six months of that year being two and seven-tenths per cent, against three and one-tenth per cent for 1887. In like manner, the continental rates averaged lower throughout the former year. Thus, most of the facts tended to make the gold exports of the year 1886 *less* than those of 1887. In the absence, therefore, of any evidence that an exceptionally large return of securities from foreign countries took place during 1886, the plethoric condition of the reserves seems to furnish the only sufficient explanation of the excessive export of gold.

Doubtless some readers will be inclined to suggest that no better proof of the power of a plethora of money to drive out gold could be desired than our experience of the last few years. But this does not seem so certain as is often supposed. It is, indeed, hard to believe that the inflated condition of the circulation has had nothing to do with the matter. But when one appeals to the facts to learn whether the forces usually supposed to be operative under an inflated currency were really at work, the results are not very satisfactory. As the argument commonly runs, inflation drives out gold by lowering the rate of

discount till it is more profitable to invest capital elsewhere. But, as Mr. Heidelbach pointed out in the *Forum* of February, 1895, while the rates in New York have been extraordinarily low, those of Europe have been lower still. May not the suggestion of the New York *Evening Post*,¹ however, furnish something of an answer to this? Since international capital is chiefly of European origin, it will naturally demand, as a condition of staying in New York (*i.e.*, away from home), not merely equal or slightly higher rates, but decidedly higher rates. It may be that rates two or more per cent higher than those in Europe will keep foreign capital in New York, while any smaller excess will tend to cause its withdrawal. Of course the limit would vary with the state of American credit, the chances for other investment, *etc.* If this reasoning be correct, the adverse working of a plethora could be demonstrated by showing not that it had made the rates lower than those of Europe, but merely that it had made the difference in favor of New York less than the usual minimum. Upon this point I have been unable to satisfy myself from the statistics of the case; but some degree of confirmation is easily obtainable. For instance, during the first half of 1886, though New York rates, as given by the *Economist*, show an average about one-fourth of one per cent higher than those of London, gold went out in large amounts. In 1887, however, New York rates averaged slightly over two per cent higher than London rates, and gold did not go, even although, as we saw earlier, other conditions favored such a movement. Again, during the autumn of 1895, gold went out for some weeks while New York rates were from one-quarter to five-eighths higher than those of London; but stopped in the latter part of September, when the difference increased to one and one-eighth. When, in turn, the difference fell to seven-eighths in the middle of November, the outward movement was renewed.

Whatever doubts may remain as to how much the plethoric condition of our reserves has contributed to the gold drain of the last few years, there is probably no need for further

¹ Some date in December of 1895.

argument to show that in general such a condition at least enhances the difficulties of checking a drain, and of protecting the government's reserve.

Having discussed at such length the evils caused by ordinary variations in the need for money, I can make only a passing allusion to those extraordinary variations which mark a panic. There is, however, little need for argument at this point. The evils of a panic are well known and keenly felt. They cannot, of course, be attributed primarily to the mere discrepancy between the need for, and the supply of, money; for deeper and more permanent causes are doubtless at work. Still, there is little room for question that the cataclysm itself, as well as its more immediate evil effects, is directly traceable to the fact that banking institutions, possessing ample resources of unquestionable character, cannot, after all, supply in sufficient amount the only form of capital at the moment in universal and imperative demand, *i.e.*, money. In a word, whatever the remoter causes of the disaster, its immediate occasion is the sudden and almost unlimited increase in the demand for money as such.

III.

I have now shown the existence of variations in the need for money. I have shown, secondly, that harm results from these variations when not accompanied by corresponding variations in supply. It remains to consider whether the presence of an elastic currency would prevent or diminish this harm. It might, at first thought, seem that an affirmative answer to this question is already implied and demonstrated in the argument that the harm in question results from discrepancy between the money need and the money supply. But, as a matter of fact, it is possible to contend that, even if the harm results from the inequality of need and supply, the remedy cannot be reached by manipulating the supply, but only by altering in some way the need. To borrow an analogy from another science, it is one thing to prove that a given poison, administered without an antidote, will kill a man, and quite another thing to prove that the

antidote will save his life. Perhaps the only way to save his life is not to give him the poison at all. To come back to our own case, it must be admitted at once that any hope of removing altogether the evils we have been considering by the establishment of an elastic currency, is in the highest degree chimerical. The changes in the need for money are often symptoms rather than causes of disease. To secure lasting benefit, the treatment must be deeper than any mere monetary reform. It is, however, possible to make out a pretty good case for the power of elasticity to mitigate, at least, the evils we have considered.

Let us begin with "emergency elasticity," the power to expand so as to meet the extraordinary need of a panic. Of course no one expects to increase the circulation rapidly enough fully to satisfy the demand which marks the acute stage of a panic. Such expansion would, perhaps, be a physical impossibility. What the advocates of elasticity do argue is, that if a scheme be provided whereby the public can be assured that practically unlimited supplies will be forthcoming — that all really urgent needs will be satisfied, then the public, thus assured, will immediately cease to feel any extraordinary need.

It is hardly necessary to remark that this reasoning has been in a high degree confirmed from experience. England, as is well known, has furnished three crucial instances in the suspensions of the Bank Act in 1847, 1857 and 1866. The success of the device on those occasions is almost universally admitted. Again, as is also well known, the idea has been repeatedly tested by the United States Treasury through the prepayment of interest on the public debt and the buying-in of bonds. That in several important instances these expedients gave great relief, can scarcely be questioned. Our clearing-house loan certificates also illustrate the application of the same idea, and of their great value there can surely be no well-founded doubt.

Again, the Imperial Bank of Germany, as is well known, has the power of expanding its issue, though under penalty. Since the establishment of that bank in 1875, however, there has

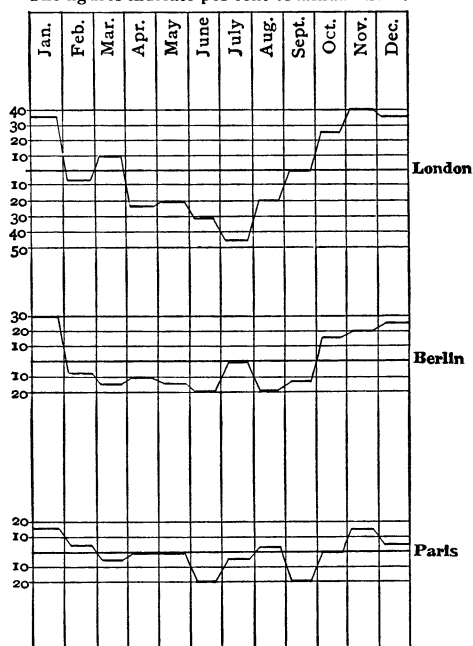
been no opportunity to test thoroughly the efficiency of the elastic limit in stopping a panic or in mitigating its evils. But is it not reasonable to argue that that very fact is the best possible proof of the efficiency of the device? Consider what it means. Twenty years have passed, in which the United States has had one crisis of the first magnitude, a second of lesser significance, and, besides, a year of great stringency and distress. During the same period England has once been saved only by the altogether exceptional action of the Rothschilds, the Bank of England and the Bank of France. Yet in all this time, Germany has not experienced a monetary disturbance sufficiently serious to test the new scheme. On the whole, it is difficult to see how that scheme could have worked better.

But again, experience furnishes some ground for the expectation that elasticity will prove valuable in mitigating the evils of those fluctuations in money need which take place in ordinary times. The most important of those evils, as we have seen, are traceable to the influence of excessive or deficient reserves on the rate of discount. The good, then, to be hoped for from an elastic currency is the prevention of any very considerable or sudden fluctuations in the discount rates. The reasonableness of this hope is more or less confirmed by the experience of various other nations. The case of Canada has repeatedly been cited in recent years. According to all accounts, the people of the Dominion have from experience no knowledge of the annual fall stringency with which our business men are painfully familiar. But Canada is a small community, and can scarcely furnish decisive evidence. Some light, perhaps, may be obtained from a comparison of the loan markets of the chief European states. It is notorious that, as compared with London, the continental capitals maintain great steadiness in rates and are almost entirely free from disastrous "squeezes." This greater steadiness of rates I have attempted to bring out by computing the percentage of variations in the average monthly rates about the yearly mean for each of the eight years, 1884 to 1891, and then making an average for the whole

period. This I have done for London, Paris and Berlin. The results are embodied in the diagram. As was to be expected, the fluctuations are least in Paris, greater in Berlin, and greatest in London.

This greater steadiness of the continental markets has been commonly explained as due to the insignificant development

Fluctuations of market rate of discount about annual mean Monthly average for 8 yrs. 1884 to 1891. The figures indicate per cent of annual mean.



on the Continent of credit operations, the smaller dimensions of the market, the insignificant volume of speculation, *etc.* I doubt whether this explanation can any longer hold in a large degree. Certainly both France and Germany have experienced during the last twenty years great expansion at every point named. Further, so far as the use of credit in place of money is concerned, its greater extension in London tends to increase the danger of a panic, but does not operate to increase the fluctuations of the rates characteristic of ordinary times. On the contrary, the extreme elasticity of credit-media substitutes

for money ought *a priori* to increase the steadiness of rates; and conversely, the greater dependence upon actual money characteristic of the Continent would be expected to make the state of the money reserves more effective to cause fluctuations in the rates. Without elasticity, therefore, those markets would be expected to show greater fluctuations. Doubtless something is to be attributed to the superior management of the continental banks;¹ yet here again it seems natural to argue that their power to furnish better management largely depends on the greater elasticity. As is well known, the Bank of England keeps out its whole uncovered circulation all the time, and therefore has no power to expand or contract, save as it contracts or expands its reserves. The continental banks, on the other hand, keep the circulation in constant flux, so that a change in the volume of outstanding notes of from twenty to thirty millions of dollars in a single week is no uncommon occurrence. This is more especially true of the Bank of France. It surely is reasonable to argue that this highly elastic condition of the circulation is one cause of importance in explaining the superior steadiness of the continental markets.

Finally, as to the matter of protecting the gold reserve of the country, is there any reasonable ground for doubting that a thoroughly elastic currency would make this task more easy? Admitting that the inflation of the currency has not been the cause of our recent exports of gold, admitting even that it has not in any considerable degree contributed to that export, still it cannot be seriously questioned that a contraction such as would naturally have taken place in an elastic currency, would have done much to check the outflow of gold. If only the national-bank notes were genuinely elastic, if they had such "homing" tendencies as New England notes had under the Suffolk system, their withdrawal from the country circulation and from the holdings of the private and state banks would have made plenty of room for the Treasury notes and silver without filling New York's reserves to repletion. Or if the Treasury notes were issued on an elastic system, say like that

¹ Mr. Ladenburg in *Forum*, January, 1896.

advocated in 1871 by Comptroller Knox and later by Secretary Windom (*i.e.*, the system of interchangeable bonds and notes), then as soon as idle money began to accumulate in New York after the panic, the notes would have been returned to the Treasury in exchange for low-rate bonds, the reserves would have remained at a reasonable level, rates of discount would have been kept somewhere near normal, the Treasury receipts would have continued to be in a considerable measure gold, and there would not have been any such easily available supply of greenbacks with which to work the "endless chain" arrangement. With all these conditions established, I venture to affirm that in spite of the free-silver agitation there would have been no gold export sufficient to arouse serious apprehension.

But, in regard to this matter, we are not dependent on theory alone. Experience, also, has shown the efficacy of currency contraction to check a gold movement. A single illustration on this point from the recent history of the Bank of England will close this article. In the fall of 1892, the Bank found itself called upon to stop a gold export. The rate was raised as usual; but the abundance of money in the city outside, made the action of the Bank impotent to affect the open market rate. At this juncture, following a plan developed in recent years, the Bank began selling consols in order to drain off the surplus funds of the market.¹ In the course of two weeks, about ten million dollars were absorbed in this way. The market quickly responded, the rate rising from about two per cent to three. In turn, the establishment of the higher rate was immediately followed by the practically complete cessation of the gold export. That contraction always has worked or always will work so well, no one would affirm; but, of its power to do much toward attaining the object sought, there is little room for reasonable doubt. F. M. TAYLOR.

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¹ See article by Heiligenstadt in Conrad's *Jahrbücher*, Folg. 3, Bd. v, S. 209.